

interact Newsletter
issue 1:3
<http://interact.nps.navy.mil>

Who we are

interact is a research group focused on issues related to the interaction of people and computing systems; building systems with people in mind. Please drop by our web site or contact us for more information.

News

Those of you who are interested or think you might be interested in doing a thesis on any topic concerning human-computer interaction, human factors, training systems, or human performance evaluation are invited to attend an informal meeting on Friday, April 25th at 0110 in Sp-257 (CS Conference room). There, I will give a short brief on what research in this area is all about as well as information on the research projects we currently have underway including some ideas for thesis topics related to those projects. My intent is to get those of us with similar interests together on a regular basis so we can discuss current research, both within and outside of our department.

If you cannot attend at that time but are interested in this, please let me know so we can try to accommodate you.

Project Updates

Navigating Large-Scale Virtual Spaces.

We are currently working on a very finely detailed model of Hermann Hall. The exterior is pretty much complete but it's the interior that we're most interested in. What we plan to do is conduct an environment familiarization study (i.e. navigation training) whereby subjects will be exposed to either the model of Hermann Hall (via a virtual environment) or the actual environment. Then we will compare performance on a number of searching tasks in Hermann Hall. As you know, it's not too hard to become disoriented in Hermann Hall. What we want to do is determine what level of fidelity is necessary to maintain in a virtual environment such that the user is able to correlate it with its real world counterpart. This study is very similar to the one I wrote to you about last month involving a part of Ft. Ord.

Thesis Topics

If you are interested in working on a thesis in one of these areas, or in any other area of human-computer interaction which may be of interest to you, please visit the website and get in touch with Dr. Rudy Darken <darken@cs.nps.navy.mil> or Dr. Kip Krebs <wkrebs@nps.navy.mil>. Each month, we will include a few thesis topics in this newsletter of special interest.

I'm reposting this one from last month. I personally think it would be a very challenging and ground breaking thesis and one that is of interest to both myself and Professor Lewis.

1. Adaptable Interfaces for Specialized Displays and Controls

When we construct web pages today, we provide information as to *exactly* what the page will look like. We specify fonts, styles, image sizes and locations, etc. But not all web browsing devices are equal in their capacity to show what the creator has labored to produce. WebTV, PDAs, and other devices must filter or otherwise alter what is currently made available. What is needed is a generalizable way for devices to make use of web content without necessarily showing it exactly as intended. In other words, we want an adaptable interface as determined by the device and user rather than by the page publisher. Contact Darken or Lewis.

Course Offerings

Summer 1997

CS4203 Interactive Computing Systems (3-2)

Instructor: Darken

Prerequisites: CS3300 or consent of the instructor

<http://interact.nps.navy.mil/darken/Academics/CS4203>

This course offers a complete study of human-computer interaction. From conventional desktop interfaces to virtual environments to multimedia. Our focus is not on implementation but rather on design and evaluation.

- o Recognize and describe human factors issues relevant to designing human-computer interfaces
- o Understand the relationship between human error and poor design and how to circumvent both
- o Understand the tradeoffs of training costs versus usability engineering costs
- o Design a human-computer interface with an iterative, design/prototype/evaluate development process and apply specific design guidelines as part of this process
- o Select appropriate interaction devices and techniques from among alternatives
- o Select appropriate dialogue style from among alternatives
- o Critique existing or proposed human-computer interfaces using concepts taught in the course

Students will perform a step-by-step project throughout the quarter taking a design from its inception, to a rough prototype, to a functional prototype and will evaluate it with real users.

Summer 1997

CS4202 Computer Graphics (3-2)